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Multi-Color Cavity Ringdown Based Detection Method and Apparatus

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(54) **MULTI-COLOR CAVITY RINGDOWN BASED DETECTION METHOD AND APPARATUS**

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See application file for complete search history.

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(57) **ABSTRACT**

A multi-color cavity ringdown based spectrometer system is housed in a light tight enclosure to detect the presence of trace quantities of gas phase molecules emanating from a subject, explosives, drugs, or hazardous materials. A method is also disclosed for simultaneous real time detection of gas phase molecules emanating from explosives, drugs, hazardous materials, a subject's breath skin or bodily fluid.

13 Claims, 9 Drawing Sheets